

Serial No. 10/627,983
Docket No. T36-158111M/RS
(NGB.274)

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AMENDMENTS TO THE CLAIMS:

1. (Previously presented) A scintillation counter including a scintillator comprising:
a Group III nitride compound semiconductor,
wherein said scintillator is excited by radiation.

2. (Previously presented) A scintillation counter according to claim 1, wherein said Group III nitride compound semiconductor includes a layer structure.

3. (Previously presented) A scintillation counter according to claim 2, wherein a layer of said Group III nitride compound semiconductor is formed on a substrate.

4. (Previously presented) A scintillation counter according to claim 3, wherein a buffer layer is formed between said substrate and said Group III nitride compound semiconductor layer.

5. (Previously presented) A scintillation counter according to claim 2, wherein said Group III nitride compound semiconductor layer includes a hetero structure.

- 6-10. (Canceled).

11. (Previously presented) A scintillation counter according to claim 1, wherein said Group III nitride compound semiconductor comprises:
a layer that emits fluorescent light when irradiated by at least one of a CU-K α -ray source, an X-ray source, and a γ -ray source.

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12. (Previously presented) A scintillation counter according to claim 1, wherein said Group III nitride compound semiconductor comprises:
a layered structure including a plurality of alternating GaN layers and InGaN layers.

13. (Previously presented) A scintillation counter according to claim 1, further comprising:

a radiation source that irradiates at least a portion of said scintillator; and
a light receiving unit that receives light emitted from said scintillator.

14. (Previously presented) A scintillation counter according to claim 13, wherein said radiation source includes at least one of a CU-K α -ray source, an X-ray source, and a γ -ray source.

15. (Previously presented) A scintillation counter according to claim 13, wherein said light receiving unit comprises:

a light amplifying and detecting unit.

16. (Previously presented) A scintillation counter according to claim 13, wherein said light receiving unit comprises:

a photomultiplier tube.

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17. (Previously presented) A scintillation counter according to claim 13, further comprising:

a spectroscope disposed between said scintillator and said light receiving unit,
wherein said spectroscope prevents light of a predetermined wavelength
from reaching the light receiving unit.

18. (New) A scintillation counter according to claim 1, wherein said Group III nitride compound semiconductor comprises:

a layered structure including two kinds of Group III nitride compound semiconductor layers.